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FIRST ANNUAL REPORT

OF THE

PRESIDENT AND DIRECTORS

OF THE

HARRISBURG & HAMBURG

RAILROAD CO.,

ACCOMPANIED BY THE

REPORT OF THE CHIEF ENGINEER,

MADE NOVEMBER, 1855.

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1855.

OFFICERS OF THE COMPANY,

ELECTED 8TH JANUARY, 1855.

President,

WILLIAM AYRES.

Directors,

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JACOB HOUTZ,
ELIAS GROVE,
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Treasurer,

JOHN BRUNER.

Chief Engineer,

DANIEL HOFFMAN.

FIRST ANNUAL REPORT.

OFFICE OF THE HARRISBURG AND HAMBURG R.R. CO.,
Jonestown, Pa., Oct. 20, 1855.

To the Stockholders of the Harrisburg and Hamburg R.R. Co.

THE act to incorporate the South Mountain Railroad Company passed the Legislature, and was approved by the Governor, on the 5th of May, 1854. Pursuant to notice given, the Commissioners named in said Act met in Jonestown, Lebanon County, on the 20th of June, 1854, at which time and place they resolved to open books, and receive subscriptions of stock to the company. In a short period, more stock was subscribed than was necessary to raise the charter, and five dollars paid in on each share. Upon the Commissioners certifying the same to the Governor, the charter was granted, and the company organized on the 8th of November, 1854.

As soon as practicable, after the organization, competent Engineers were selected to examine the several routes, and on May 14th, 1855, they commenced operations, details of which will appear in the Chief Engineer's Report.

At the last session of the Pennsylvania Legislature, the name of the organization was changed from the "South Mountain," to that of the "*Harrisburg and Hamburg Railroad Company.*"

The Harrisburg and Hamburg Railroad is located through some of the most fertile portions of Pennsylvania, and at its termini connects with the most prosperous and productive railroad improvements in the state and country. The grand chain of railroads, of which ours forms a most important link, commences at the city of New York, the great commercial metropolis of America; extends to Easton, Pa., and is called the New Jersey Central Railroad. The second link is the Lehigh Valley Railroad, to Allentown; the third is the Allentown and Port Clinton Railroad, terminating at Hamburg. Then commences the *Harrisburg and Hamburg Railroad*, forming the fourth link; which brings us at once to the capital of our Commonwealth. Here our enterprise connects with numerous railroads in operation, in process of construction, and projected, radiating from here to all points of the compass. Prominent among these is the Lebanon Valley Railroad to Reading; the road to York and Baltimore, "the monumental city;" the Northern Central; the Cumberland Valley; and the Great Pennsylvania Central Road to Philadelphia, Pittsburg, and the West. These several roads, with their branches, give facility of access to almost every county in the State, and also afford means by direct routes to reach all conspicuous points of interest and trade in our adjoining States.

Our connection with the Cumberland Valley Railroad leads the line, (of which great chain we are a link,) over the Franklin Railroad to Hagerstown, Maryland; thence to Harper's Ferry, and connecting with the Winchester Road; from thence to Staunton, Christianburg, Abington, Knoxville, and other places: at Knoxville connecting with the Memphis and Charleston, and Savannah Railroads. As soon as the several divisions are completed, this route from the valley of the South to the City of New York, touching, as it does, so many important places, and tra-

versing a region of country so magnificent, will be one of the greatest thoroughfares in the United States.

There is also another important chain of Railroads from Hagerstown, connecting with the Baltimore and Ohio Road, thence to Parkersburg in Virginia; from that point to Cincinnati and St. Louis. The route north of Hagerstown passes through seven of the heaviest grain-producing counties of Maryland and Pennsylvania; any one of these can yield two millions bushels of grain yearly, one half of which amount would find its way over our road to New York.

The Great Pennsylvania Central Railroad, with which the Harrisburg and Hamburg road connects at the former place, shows by its statistics that, during the year 1854, the number of passengers carried between Harrisburg and Pittsburg was 157,100, passing over the whole line of the road. The total receipts from said passengers were \$1,292, 581.18. The receipts from freight carried during the same year were \$2,026,611.55, making a total of \$3,319,192.73. These results are truly great and highly encouraging to that grandest monument of Pennsylvania's internal improvements; and in a letter received Nov. 15th, from Wm. B. Foster, Esq., Vice Pres't. Pa. R. R., he says that their receipts for this year will exceed those of 1854 by half a million! It is but a fair calculation to say, that one third of the Passengers and Freight coming over this road, will be also passed over the Harrisburg and Hamburg Railroad in its transit to and from New York.

The city of Philadelphia is at this moment straining every nerve to raise \$250,000, to aid in completing the Steubenville and Indiana Railroad, which thereby will afford an unbroken gauge of road to St. Louis and the Great West. This is a most important matter to Philadelphia, but it is no less momentous to the interests of New

York. In order to avoid the circuitous route, via Philadelphia, we may premise that one third of the travel and trade will reach New York via the Harrisburg and Hamburg Railroad, as the distance is forty miles less. Public transportation knows no preference of route, save that which tends best to subserve the interests and ends at stake: hence the shortest and most convenient will always be deemed the best road.

The Coal trade from the mines of the Susquehanna region, forms an important matter of consideration. Prominent, among these, and producing a superior article of anthracite, is the Lyken's Valley Coal Field, in Dauphin County, 25 miles above Harrisburg. Also the Mahanoy and Shamokin, which are deemed equal to those fields bordering on the Schuylkill. The amount which it is presumed will be carried on our road to New York, and the several counties through which the road passes, cannot now be estimated. The facility of transportation will be far superior to that of any other road leading to New York, and the cars which load at the mines will be enabled to run without transhipment throughout the entire line. Another item of great magnitude is realized in the Bituminous Coal of Huntingdon and Bedford counties; which is believed to be superior to any other in Pennsylvania, for using in locomotives, for steam vessels, the manufacture of coke iron, and for various other purposes. Experiment proves these assertions. A further valuable item is comprised in the lumber business, which we may suppose will produce an immense freight trade on our road—to supply Dauphin, Lebanon, Berks and Schuylkill counties. The designating of any anticipated amount would be but an approximation to what we may safely presume will be the actual demand; and as these afore-mentioned counties must receive their supply from the Susquehanna, we may expect with certainty a large

business, from the fact that no point where advantageous purchases can be made is superior to Harrisburg, our Western terminus.

It is now but a little over one year since our enterprise was conceived and the preliminary work commenced; and at this moment we have evidence that assiduity has been united to the ability manifested by those to whom the active operations were confided; for which circumstance I am pleased to congratulate the members of the Board, and all who evince an interest in the completion and prosperity of our road. The selection of DANIEL HOFFMAN, Esq., as Chief Engineer, has proved highly advantageous to the company; and I am happy to recognize in him qualities which have made him a thorough and satisfactory officer. I am happy also to attest the interest evinced by his assistants and entire corps; and I would say, that the friendly and hospitable manner in which they were received everywhere in making their preliminary surveys of the several routes, may be deemed an acceptable indication not only of their gentlemanly conduct, but also of the lively feeling generally entertained by the public in the progress and consummation of our favorite enterprise,—the Harrisburg and Hamburg Railroad.

Accompanying herewith will be found the report of the Chief Engineer, embracing full details of his operations during the past Summer, with the necessary estimates, maps, tables, &c.

By order of the Board.

WM. AYRES, *President.*

CHIEF ENGINEER'S REPORT.

ENGINEER'S OFFICE,
Jonestown, Nov. 20th, 1855.

To Wm. Ayres, Esq.,

President of the Harrisburg and Hamburg R. R. Co.:

SIR:—I have the honor to submit to you the following Report, concerning the Harrisburg and Hamburg Railroad. Since my appointment in April last, directing the Surveys for the Harrisburg and Hamburg Railroad, from Harrisburg in the County of Dauphin to Jonestown in the County of Lebanon, and from thence to the Borough of Hamburg in the County of Berks, Pennsylvania. I have, with my assistants, E. G. Rehrer and John B. Johnson, commenced the surveys at the Borough of Hamburg, on the 16th of May last, and three months were occupied on the field in making the necessary examinations and surveying the different routes which presented themselves to the eye as being practicable for a Railroad; during which time a belt of country of about seven miles in width has been traversed in every direction, from Hamburg to Harrisburg, and the different routes which promised any favorable results were carefully and accurately surveyed by my assistants, for the purpose of comparing the same, and to enable me to select the most practicable route for the Railroad in question. By the operation of which and during the time mentioned, one hundred and twenty miles of line have been carefully

and accurately traced with the instruments, and the result was the discovery of a line that, for grades, will compare well with other roads in Pennsylvania, and for straightness, I think no other road in Pennsylvania, of the same length, can compare with it.

The country which the proposed road is intended to traverse is a well known and fertile agricultural district, bounded on the north by the Blue Mountains, and extending about fifteen miles south to the South Mountain. It is thickly settled, and various thriving towns and villages are along the route. The country is chiefly drained by the Northkills which fall into the Tulpehoken, a tributary to the Schuylkill, the Little Swatara with its tributaries, which empties into the Big Swatara, about one quarter of a mile south-west of Jonestown, the Big Swatara with its other tributaries, which empties into the Susquehanna, at Middletown, and Paxton Creek which heads about two miles and a half north of Linglestown, and empties into the Susquehanna, below Harrisburg; the waters tributary to the Schuylkill and those of the Little and Big Swatara Creeks, east of the confluence of the two last named Creeks, are divided by a gently elevated ridge running from the Blue Mountain, in a south-west direction from a point about twelve miles west of Hamburg, on which is situated Straustown, where it attains a height of six hundred and thirty-nine feet above tide, two hundred and ninety-eight feet above the Schuylkill, at Hamburg, two hundred and sixty feet above the Philadelphia and Reading Railroad, at Hamburg, two hundred and forty-eight feet above the Swatara, at Jonestown, two hundred and thirty-two feet above the Union Canal, at Jonestown, and three hundred and twenty-two feet above the junction of the Pennsylvania Central Railroad, the Cumberland Valley Railroad, and Harrisburg and Lancaster Railroad, at Harrisburg.

The surface of the country is in many parts much broken and rolling, but a great portion of it is beautiful and almost level. Some of the streams mentioned, and the smaller ones tributary thereto, head on comparatively smooth ground, near the base of the Blue Mountain, but in their course cut deep into the general level of the country, making a great portion of it rugged and impracticable for Railroad purposes. These characteristics point at once to the adoption of the line which is hereafter described, as it is the cheapest, the shortest in distance with easier grades, and much less curvature. It commences at the north end of Hamburg, from which it runs in a westerly direction, crosses the Schuylkill Canal sixty feet above water, and the Schuylkill River sixty-six feet above water, by a bridge spanning both the canal, the river, and an Island on the Schuylkill, with a level grade which crosses the Philadelphia and Reading Railroad, thirty-five feet above its grade; and from thence by ascending grades with intermediate levels, making an average ascending grade of thirty feet per mile, crossing the Public Road which leads from Shartlesville to Port Clinton, about four hundred yards north of Shartlesville, and the road leading from Mr. Joseph Seyford's lower Forge, his Gristmill and Sawmill, to his upper Forge, on the Northkills, about one quarter of a mile north of the former, and about one mile and a half south of the latter, and reaching the summit which divides the waters of the Schuylkill and the Swatara, about one third of a mile north of Straustown, at which the undulating grades commence and continue until the summit at Linglestown is reached. After leaving Straustown, the line still continues in a direction a little south of west, crosses the road leading from Rehrersburg to Pottsville, at Schlaesman's Inn, passes about half a mile south of Mr. Henry Subert's Mill, and passes through the north part of Millersburg, leaves Fredericksburg about five

hundred feet to the north, Monroe Forge about three miles and a half, and passes through the north part of Jones-town, a fixed point in the route by the act of incorporation, and thence crosses the Big Swatara forty-two feet above the surface of the water, the Union Canal twenty-seven feet above the surface of the water, by a bridge spanning both the Swatara and the Canal, the road leading from the State road to the Union Forge, about half a mile north of the State road, leading from Jonestown to Harrisburg, and about three miles south of the Union Forge, and continues on favourable ground, leaving Mount Nebo to the left, crosses Reed's Creek, thirty-nine feet above water, the Indiantown at Harper's, fifty feet above water, and leaving Harper's a little to the left, Lemberger's Factory about two miles to the right, crosses Bow Creek fifty feet above water; Manada Creek twenty-six feet above water, near a Gristmill, and about one mile and a half south of Manada Furnace, the east branch of Beaver Creek, twenty-nine feet above water, and the west branch of Beaver Creek, twenty-four feet above water, and thence passes a few hundred feet north of Linglestown, at which the head waters of Paxton Creek are reached. Linglestown is situated on the summit which divides the waters of Beaver Creek, which empties into the Swatara, and those of Paxton Creek, which empties into the Susquehanna, from which we have a gentle descending grade to Harrisburg, and from which our line bears a little more to the south, and follows the valley of Paxton Creek, leaving Krumm's mill a little to the left, Fox's mill a little to the right, crosses Paxton Creek, on the east side of a narrow and high ridge, around which it winds, thirty-one feet above water, cuts through said ridge and crosses Paxton Creek, again on the west side of said ridge, twenty-four feet above water and the Pennsylvania canal thirteen feet above water, about three miles north of Harrisburg, and about two miles and a half

south of the east end of the Pennsylvania Central Railroad bridge, and terminates at the depot at the end of Market street, in the borough of Harrisburg. Such is the position and general character of the line which on reference to a topographical map made on a large scale, and a profile of the ground and grades, and also the accompanying map and the table of grades and curvatures, will more clearly and in detail appear.

Its length from Hamburg to Harrisburg is fifty-four miles and thirty-seven hundred feet, and making, with the New Jersey Central Railroad, the Lehigh Valley Railroad, and the proposed Railroad from Allentown to Hamburg, one-hundred and seventy miles from the city of New York to Harrisburg, and twenty-four miles shorter than by way of Philadelphia, allowing to take the shortest route from New York to Philadelphia; and about sixteen miles shorter than by way of the Dauphin and Susquehanna Railroad.

A portion of the work towards the Hamburg end of the line will be rather heavy but not hard to work: the excavation of the entire line will principally consist of common earth, red and yellow slate, and some sand-stone, which can be worked at low prices, except on three points of the line at which narrow strips of limestone are crossed.

The maximum grade is forty-nine feet per mile, and this is in only a few instances, and is descending eastward. The shortest radius of curvature is one thousand four hundred and thirty-three feet, and this is used at one place only.

It will be seen by the table of grades that the aggregate ascent westward is	- - - - -	592 feet
do eastward	- - - - -	687 $\frac{1}{2}$ "
Average of eastward and westward ascent	- -	639 $\frac{3}{4}$ "
The nett ascent eastward is	- - - - -	327 $\frac{1}{2}$ "
do westward	- - - - -	232 "
Average of nett ascents	- - - - -	279 $\frac{3}{4}$ "
Showing an increase of summit height by undulation of	- - - - -	360 "
Average ascending grade per mile eastward	-	12 $\frac{1}{2}$ "
" " " " westward	-	10 $\frac{8}{10}$ "
Average of eastward and westward per mile		11 $\frac{65}{100}$ "
Total length of line (as before stated) 54 miles,		3706
Total length of tangent or straight line 44 "		4427
Making 82 per cent. of the line straight, and only eighteen per cent. of the entire line on curves.		

The total amount of curvature is 774° 43' making only two circles and fifteen-hundredths of a circle.

The average radius of curves is - - - 3618 feet
Minimum radius (used in but one place) 1433 "

The cost of completing the entire road, including the necessary sidings, water stations, engine houses, land damages, rolling stock, contingencies and engineering is estimated at one million five hundred and eighty-five thousand four hundred and twenty-eight dollars.

The above estimate is for a single track, with the necessary sidings above mentioned, and every other necessary accommodation to the opening of the road. The graduation, masonry and bridging is also for a single track.

The enlargement of the work for a second track can be done along this line, when it may be wanted, nearly as cheap as at the time of construction, and without interfering with the running on the road.

TABLE OF GRADES,
HARRISBURG & HAMBURG RAILROAD.
1855.

Total Distance.		Distance.	Ascent westward.	Total ascent westward.	Ascent eastward.	Total ascent eastward.
Miles.	Feet.					
Hamburg.						
0	2900	2900	Level		Level	
2	4540	12200	114	114		
4	3880	9900	16	130		
5	4600	6000	34	164		
7	40	6000	56	220		
8	760	6000	12	232		
9	5080	9600			36	36
12	640	11400	14	246		
14	4580	14500			84	12
16	4320	10300	Level		Level	
17	1240	2200	14	260		
18	2560	6600	Level		Level	
19	1880	4600	20	280		
20	3400	6800			60	180
21	420	230	10	290		
21	4120	3700			34	214
24	180	11900	30	320		
25	1800	6900			56	270
27	4140	12900	46	366		
29	2180	8600			76	349
29	2880	700	Level		Level	
31	620	8300	46	412		
32	4040	8700			70	416
34	2480	9000	9	421		
35	3200	7000	55	476		
36	4920	6900			52	468
38	2860	8600	54	530		
40	3800	11500	8	538		
41	3520	5000			30	498
43	360	7400	6	544		
43	3760	3400	20	564		
45	1500	8300			14	512
46	2120	5900	28	592		
47	840	4000			28	540
48	3760	8200			44	584
50	1000	7800			38	622
51	4220	8500			30	652
52	2940	4000			22	674
54	3706	11326			13½	687½
					Harrisburg	

Herewith accompanying is a map showing the location of the road and its connections with other roads which will make a direct line of railroads from the city of New York to Harrisburg, Pittsburgh, St. Louis, and other western and southwestern cities.

This map is made in three parts, each on a different scale. The one shows the railroad route from the cities of New York and Philadelphia through New Jersey, Pennsylvania and parts of the adjoining States. The second is made on a small scale, and shows the principal routes through to St. Louis. The third is made on a larger scale, and shows the country between the Schuylkill and Susquehanna rivers, and the true position of the Harrisburg and Hamburg railroad to the Lebanon Valley and Dauphin and Susquehanna railroads.

In conclusion I beg leave to bear testimony to the energy and perseverance manifested by E. G. Rehrer and John B. Johnson, and their several assistants in the prosecution of the surveys.

All of which is respectfully submitted.

DANIEL HOFFMAN, *Chief Engineer.*

